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DESIGN CRITERIA FOR SHIPBOARD MEDICAL SPACES.(U)  
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N00014-74-C-0404

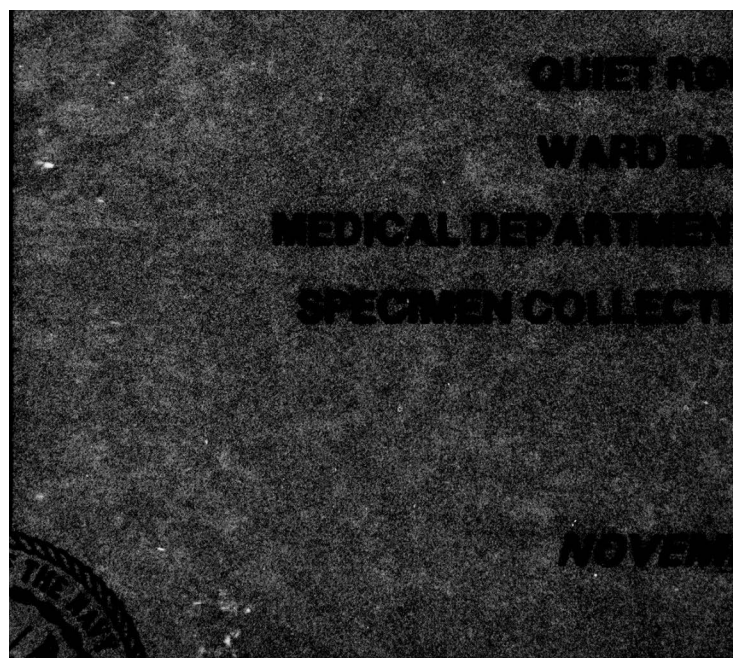
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Design Criteria for Shipboard Medical Spaces, November 1976, present in drawings and text, the functional design requirements of the Bureau of Medicine and Surgery for the following types of shipboard medical spaces: <ul style="list-style-type: none"> <li>(1) Quiet Room Bath,</li> <li>(2) Ward Bathroom,</li> <li>(3) Medical Department Office, and</li> <li>(4) Specimen Collection Area.</li> </ul>		

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This technical report takes into account the existing equipment limitations and shipboard constraints. Using the present state-of-the-art as a baseline, an outline of an R&D program will be developed. Accomplishment of this program is expected to reduce or to eliminate, in future ships, the effects of the existing equipment limitations and shipboard constraints. This R&D program will be developed as the design criteria are worked out and will be incorporated in the final report.

Additionally, these design criteria are intended to assist the Naval Sea Systems Command in designing and building shipboard medical spaces which will most efficiently and economically accomplish their purpose. They embody arrangements of modern types of equipment, which take advantage of recent advances in techniques and equipment design and, at the same time, require a minimum of space. It is expected that they will provide a rational basis for the usual structural and arrangement drawings. In so doing, they will effect a much-needed standardization.

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DESIGN CRITERIA  
FOR  
SHIPBOARD MEDICAL SPACES

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Project No. NR105-786/9-26-75 (444)

November 1976

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## PROJECT DESCRIPTION

Design criteria for 12 types of shipboard medical spaces are being developed under Contract No. N00014-74-C-0404, Modification P00002. The work is being done in three increments as indicated below:

### First Increment

Medical Treatment Unit  
Eye Examination/Range Room  
Medical Office and Consultation Room  
Treatment Waiting Room and Medical Emergency Expansion Space

### Second Increment

Surgical Gas and Equipment Room and Surgical Machinery Room  
Scrub Room and Substerile Area  
Audiometry Room  
Medical Linen Issue Room

### Third Increment

Quiet Room Bath  
Ward Bathroom  
Medical Department Office (Vice Ward Pantry)  
Specimen Collection Area

The design criteria are intended to provide the optimal functional configuration for each type of space, giving due weight to the current equipment limitations and the existing shipboard constraints. Using these design criteria as a baseline, an outline for a related corrective R&D program will be developed. Future accomplishment of this program will reduce or eliminate the effects of the existing shipboard constraints and equipment shortcomings detected during the development of the design criteria.

The framework for the R&D program will be developed as work progresses and will be presented as an attachment to the final report.

The design criteria for the third increment are presented in the following pages.

SECTION 1

DESIGN CRITERIA  
FOR  
QUIET ROOM BATHS

November 1976



## DESIGN CRITERIA FOR QUIET ROOM BATHS

### Purpose

These design criteria are intended by the Bureau of Medicine and Surgery to assist the Naval Sea Systems Command in designing and building shipboard Quiet Room Baths which will most efficiently and economically accomplish their purpose. They embody an arrangement of modern types of equipment. At the same time, they require a minimum of space. It is expected that they will provide a rational basis for the usual structural and arrangement drawings. There is no intention to abridge good design and shipbuilding practice.

Adherence to the arrangement shown is highly important. Dimensions shown (except for overall dimensions) are intended to be typical and are not intended to be restrictive with respect to the suppliers of the equipment. Minor adjustments may be necessary to accommodate the equipment provided. Overall dimensions show the minimum acceptable usable area, which must be kept free from encroachment by nonmedical items.

The equipment and service connections shown are confined to the major fixed and portable items necessary to accomplish the medical mission of the baths. There is no intent to include the nonmedical equipment routinely provided in such spaces, e.g., ventilation ducts, space lighting, etc., which must not be allowed to infringe on the working area.

### Specific Criteria

1. The intent is to design a Quiet Room Bath which will be compatible with the design of the Quiet Room. One or more spaces of the latter type may be found in major ships, especially those with a casualty receiving and treatment mission. A separate, private bath must be provided for each Quiet Room.

2. The quiet room itself is suitable for routine medical care and for treatment of battle casualties. In the latter case, it is intended to function as part of a casualty-handling system. In order to obtain the maximum benefit from the capabilities of the space when the influx of patients is heavy, as in an amphibious assault or an enemy engagement, the three functions of first aid, triage, and holding should be performed at other places in the ship, so that only those patients requiring the capabilities of the quiet room are brought to it. The same considerations apply to the bath.
3. The quiet room is also intended to function as an isolation room. Accordingly, bacteriological filters must be installed in both the supply and exhaust ventilation ducts. Likewise, the ventilation system for the bath must be equipped with adequate filter protection. Additionally, the quiet room is intended to function as an auxiliary intensive care ward, if required. Thus, the quiet room and the bath are designed to be trifunctional.
4. Habitability standards must be met. The provisions of the Air Conditioning, Ventilation and Heating Design Criteria Manual for Surface Ships of the United States Navy, 1 July 1969, N.S. 0938-018-0010, are applicable.
5. The door of the undersink cabinet is to be equipped with a readily operated latch to prevent opening as a result of ship motion.
6. The cabinet and other furniture are to be made of steel, excepting trim, which may be made of an acceptable, fire-retardant material.
7. The height of the overhead shall be at least 7 feet, and the overhead is to be fully sheathed.
8. The noise level is to be Category C of the General Specifications for Ships of the United States Navy. The room is to be soundproofed.
9. Equipment is to conform to Grade B shock standards as a minimum.

### Drawing Notes

1. The numbers in circles ( 3 ) identify pieces of equipment; the letters in squares ( A ) identify services which are required, approximately in the locations shown. The exact locations will be in accordance with the recommendations of the equipment suppliers.
2. Details such as wiring, tubing, and piping have been omitted in the interest of simplicity.
3. Inches may be converted to metric equivalents by the use of the following table.

### INCH-MILLIMETRE EQUIVALENTS

in	0	1	2	3	4	5	6	7	8	9
	mm									
0		25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2362.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6
100	2540.0									

Note: Values in this table are based upon the relation 1 in. = 25.4 mm. By manipulating the decimal point, any decimal value or multiple of an inch may be converted to its equivalent in millimetres, centimetres, or metres.

# **QUIET ROOM BATH MAJOR EQUIPMENT AND SERVICES**

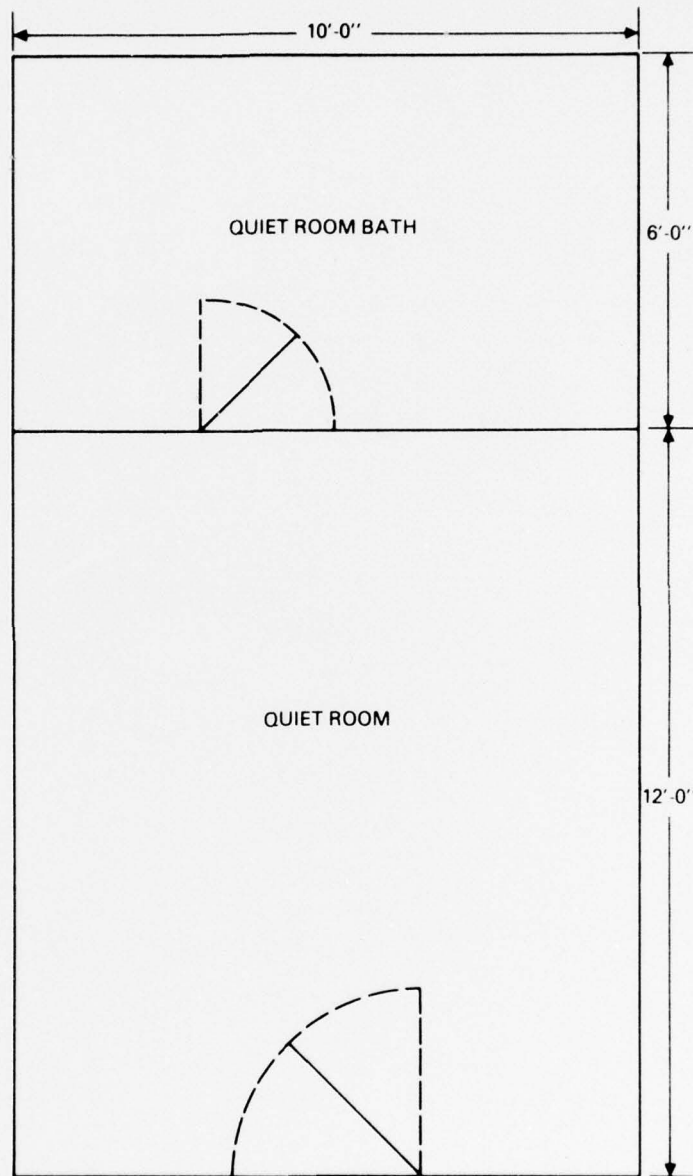
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1	1	CONVENIENCE ELECTRICAL OUTLET (DOUBLE)	NAVSEA	X					
2	1	GRAB RAIL	NAVSEA						
3	1	HAMPER, DIRTY LINEN (PORTABLE)	NAVSEA						
4	1	MIRROR	NAVSEA						
5	1	SHELF (CRES), WITH LIP	NAVSEA						
6	1	SHOWER	NAVSEA		X	X	X		
7	1	SHOWER STALL, WITH CURTAIN	NAVSEA						
8	1	SINK, LAVATORY, WITH CABINET UNDER	BUMED		X	X	X		
9	1	STOOL (PORTABLE)	NAVSEA						
10	1	TOWEL RACK	NAVSEA						
11	1	UTENSIL RACK, FOR BEDPANS AND URINALS	BUMED						
12	1	WATER CLOSET	NAVSEA					X	X
13	1	WATER CLOSET STALL, WITH DOOR	NAVSEA						

## SERVICES

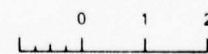
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 B COLD FRESH WATER  
 C HOT FRESH WATER  
 D DRAINAGE  
 E SALT WATER  
 F SEWAGE DRAINAGE



## QUIET ROOM AND BATH



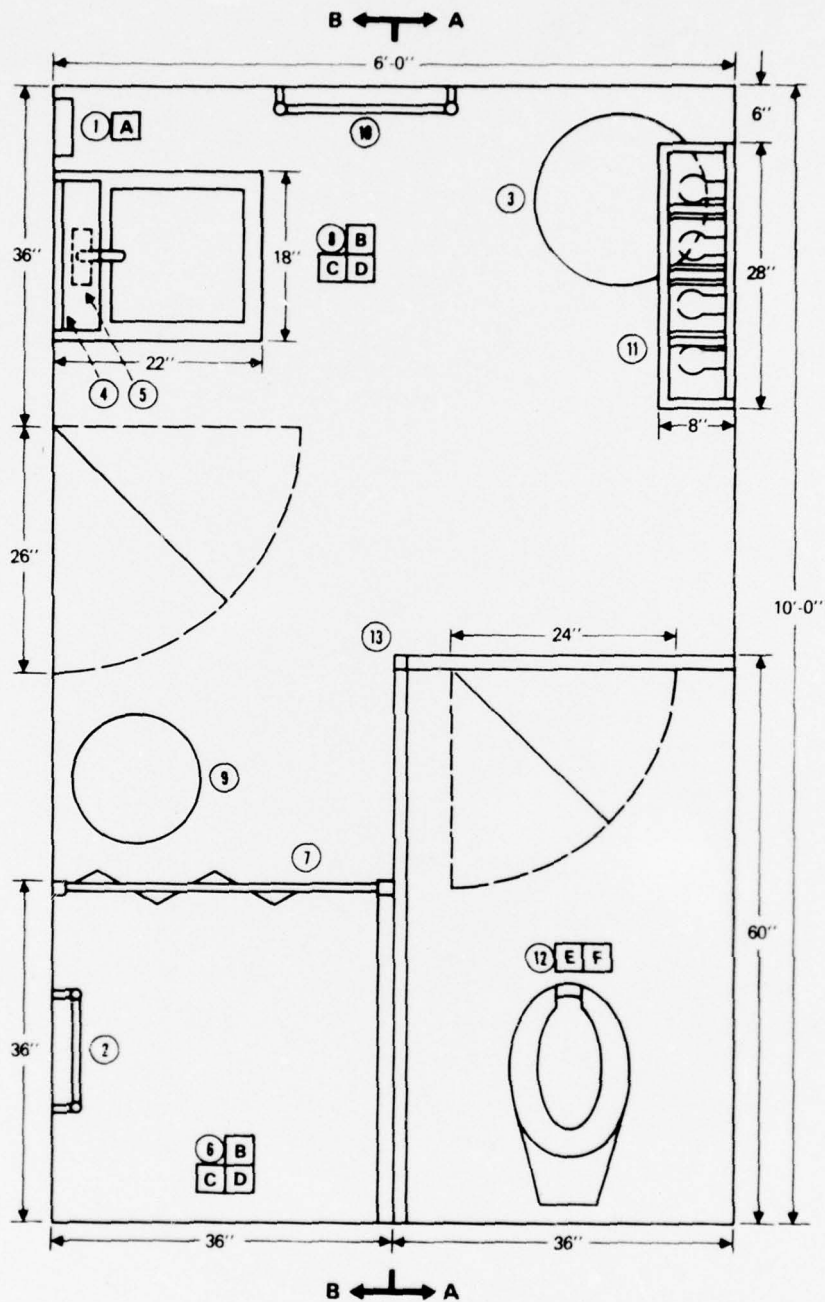
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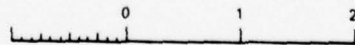
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## QUIET ROOM BATH

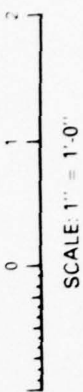
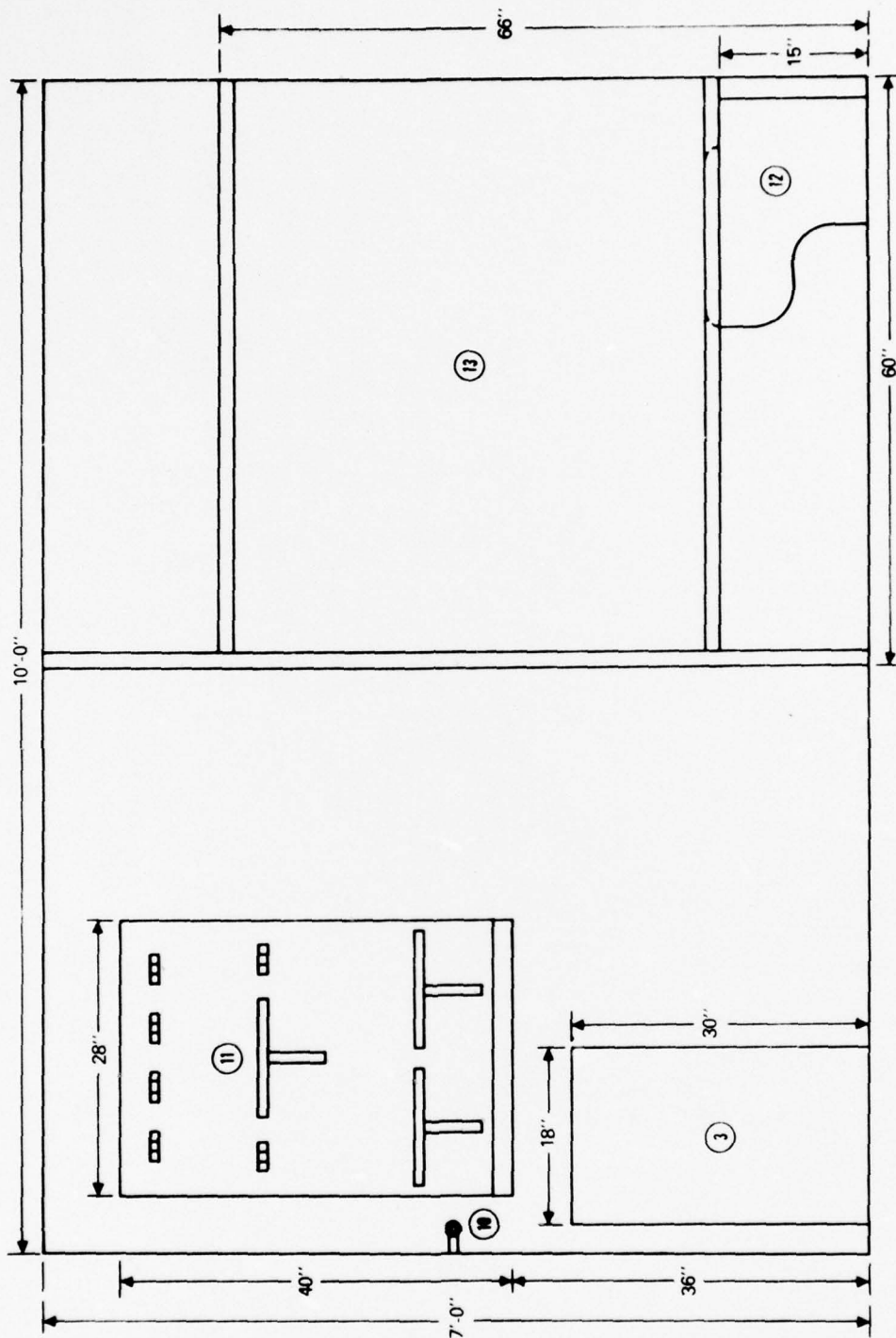


## PLAN



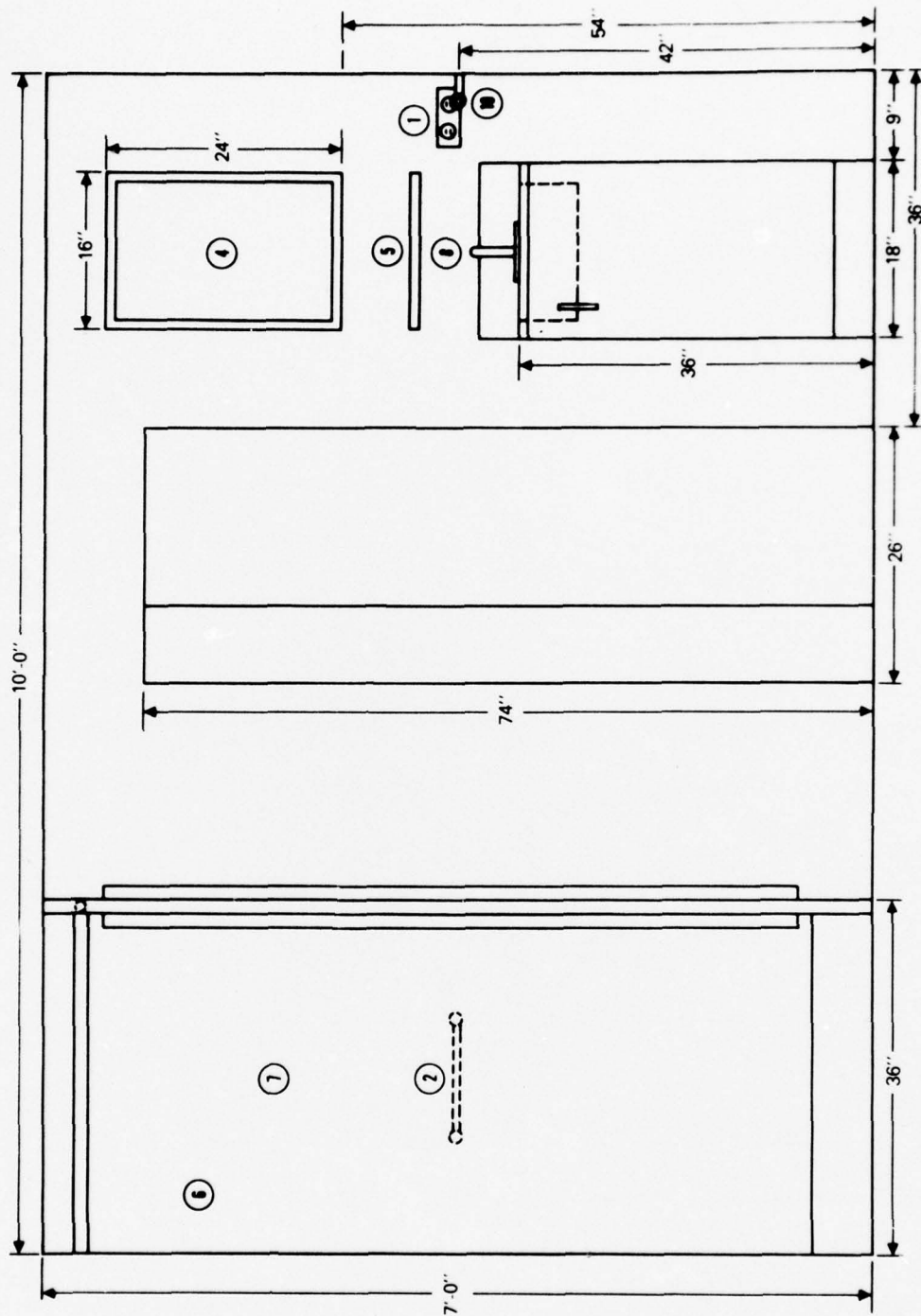
SCALE: 1" = 1'-0"

# QUIET ROOM BATH



## ELEVATION A-A

# QUIET ROOM BATH



## ELEVATION B-B

November 1976

1.8

SECTION 2

DESIGN CRITERIA  
FOR  
WARD BATHROOMS

November 1976

## DESIGN CRITERIA FOR WARD BATHROOMS

### Purpose

These design criteria are intended by the Bureau of Medicine and Surgery to assist the Naval Sea Systems Command in designing and building shipboard Ward Bathrooms which will most efficiently and economically accomplish their purpose. They embody an arrangement of modern types of equipment. At the same time, they require a minimum of space. It is expected that they will provide a rational basis for the usual structural and arrangement drawings. There is no intention to abridge good design and shipbuilding practice.

Adherence to the arrangement shown is highly important. Dimensions shown (except for overall dimensions) are intended to be typical and are not intended to be restrictive with respect to the suppliers of the equipment. Minor adjustments may be necessary to accommodate the equipment provided. Overall dimensions show the minimum acceptable usable area, which must be kept free from encroachment by nonmedical items.

The equipment and service connections shown are confined to the major fixed and portable items necessary to accomplish the medical mission of the bathrooms. There is no intent to include the nonmedical equipment routinely provided in such spaces, e.g., ventilation ducts, space lighting, etc., which must not be allowed to infringe on the working area.

### Specific Criteria

1. The intent is to design a Ward Bathroom which will be compatible with the design of the Ward. One or more spaces of the latter type may be found in major ships, especially those with a casualty receiving and treatment mission. Normally, a bathroom should be provided for each ward, and should be as close thereto as is feasible. The bathroom size will depend upon the ward capacity.



2. The ward itself is suitable for routine medical care and for treatment of battle casualties. In the latter case, it is intended to function as part of a casualty-handling system. In order to obtain the maximum benefit from the capabilities of the space when the influx of patients is heavy, as in an amphibious assault or an enemy engagement, the three functions of first aid, triage, and holding should be performed at other places in the ship, so that only those patients requiring the capabilities of the ward are brought to it. The same considerations apply to the ward bathroom.

3. The following ratios of ward berths to various bathroom fixtures were used:

Lavatories - 7

Water Closets - 8

Showers - 10

The accommodations provided are based upon the number of beds installed in the ward, namely, 32, as follows:

Lavatories  $\frac{32}{7} = 4^+$ . Use 5.

Water Closets  $\frac{32}{8} = 4$

Showers  $\frac{32}{10} = 3^+$ . Use 4.

4. Other factors used in the design are listed below:

- a. Arrange access to lavatories and shower stalls so as to avoid passing through the water closet area,
- b. Provide "towel-off" areas in front of shower stalls, which will be out of the traffic pattern.
- c. As far as feasible, arrange fixtures so that half can be secured for cleaning while the other half remains in use.

- d. Provide a traffic pattern which will protect users from being splashed as much as practicable.
5. Habitability standards must be met. The provisions of the Air Conditioning, Ventilation and Heating Design Criteria Manual for Surface Ships of the United States Navy, 1 July 1969, N.S. 0938-018-0010, are applicable. Adequate ventilation is especially important.
6. The service (deep) sink is important, as it provides a convenient facility for washing dirty swabs and dumping dirty water. In the absence of such a sink, there is a strong temptation to use any convenient sink, with the attendant danger of cross-contamination.
7. The doors of the undersink cabinets are to be equipped with readily operated latches to prevent opening as a result of ship motion.
8. The cabinets and other furniture are to be made of steel, excepting trim, which may be made of an acceptable, fire-retardant material.
9. The height of the overhead shall be at least 7 feet, and the overhead is to be fully sheathed.
10. The noise level and lighting level are to be in accordance with the General Specifications for Ships of the United States Navy.
11. Equipment is to conform to Grade C shock standards as a minimum.

#### Drawing Notes

1. The numbers in circles ((3)) identify pieces of equipment; the letters in squares ([A]) identify services which are required, approximately in the locations shown. The exact locations will be in accordance with the recommendations of the equipment suppliers.
2. Details such as wiring, tubing, and piping have been omitted in the interest of simplicity.

3. Inches may be converted to metric equivalents by the use of the following table.

INCH-MILLIMETRE EQUIVALENTS

in	0	1	2	3	4	5	6	7	8	9
	mm									
0		25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2362.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6
100	2540.0									

Note: Values in this table are based upon the relation 1 in. = 25.4 mm. By manipulating the decimal point, any decimal value or multiple of an inch may be converted to its equivalent in millimetres, centimetres, or metres.

**WARD BATHROOM  
MAJOR EQUIPMENT AND SERVICES**

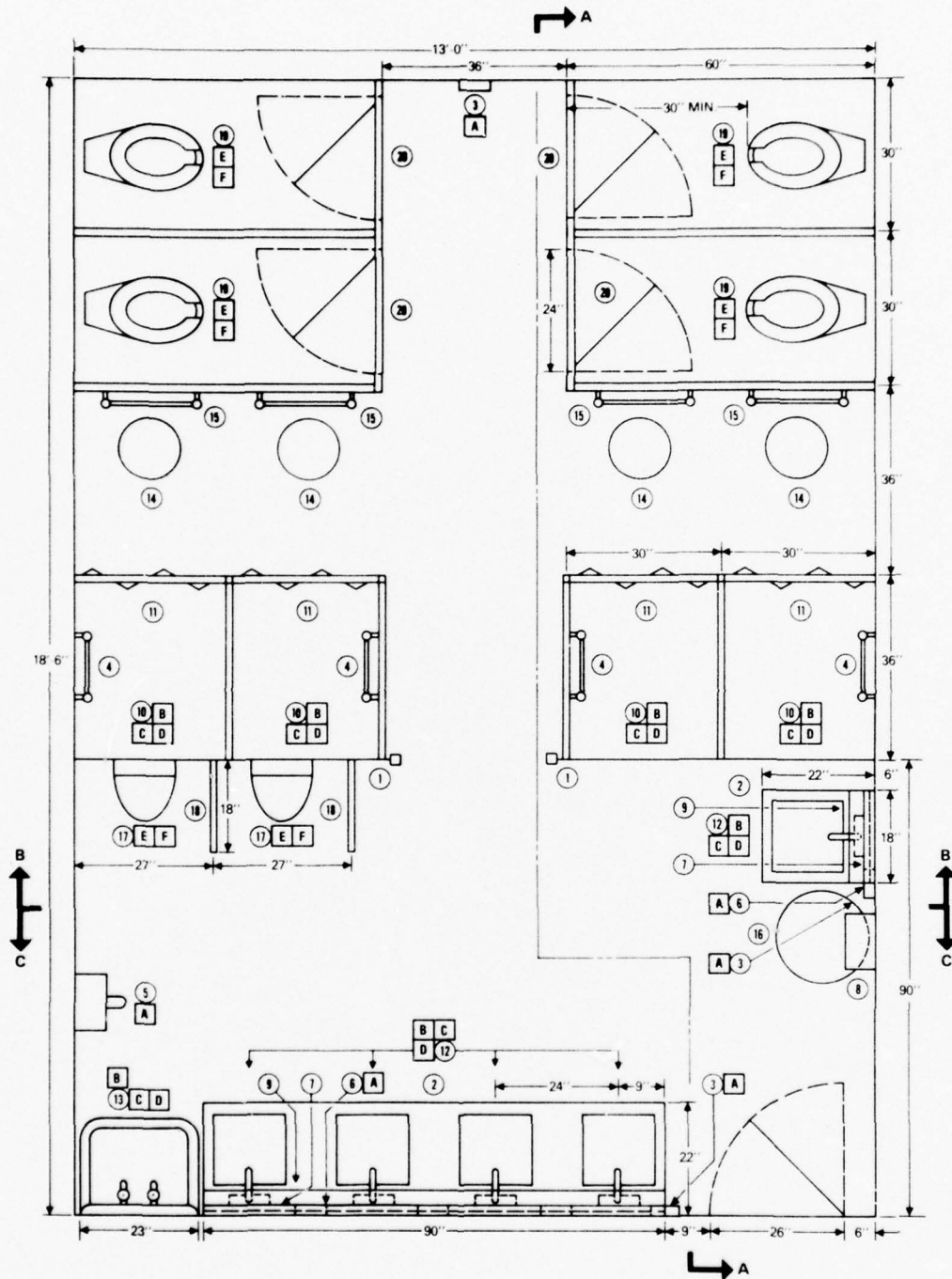
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				A	B	C	D	E	F
1	2	BULKHEAD AND STANCHION	NAVSEA						
2	2	CABINET, UNDERSINK	BUMED						
3	6	CONVENIENCE ELECTRICAL OUTLET (DOUBLE)	NAVSEA	X					
4	4	GRAB RAIL, SHOWER	NAVSEA						
5	1	HAND DRYER, ELECTRICAL	NAVSEA	X					
6	2	LIGHT OVER MIRROR	NAVSEA	X					
7	2	MIRROR	NAVSEA						
8	1	PAPER TOWEL DISPENSER	COMMERCIAL						
9	2	SHELF (GRES), WITH LIP	NAVSEA						
10	4	SHOWER	NAVSEA		X	X	X		
11	4	SHOWER STALL, WITH CURTAIN	NAVSEA						
12	5	SINK, LAVATORY	BUMED		X	X	X		
13	1	SINK, SERVICE (DEEP)	NAVSEA		X	X	X		
14	4	STOOL (PORTABLE)	NAVSEA						
15	4	TOWEL RACK	NAVSEA						
16	1	TRASH RECEPTACLE	NAVSEA						
17	2	URINAL	NAVSEA					X	X
18	2	URINAL PARTITION	NAVSEA						
19	4	WATER CLOSET	NAVSEA					X	X
20	4	WATER CLOSET STALL, WITH DOOR	NAVSEA						

SERVICES

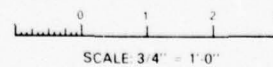
A 110 V 60 HZ ELECTRICITY  
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 C HOT FRESH WATER  
 D DRAINAGE  
 E SALT WATER  
 F SEWAGE DRAINAGE



# WARD BATHROOM

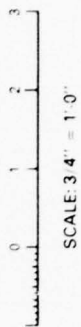
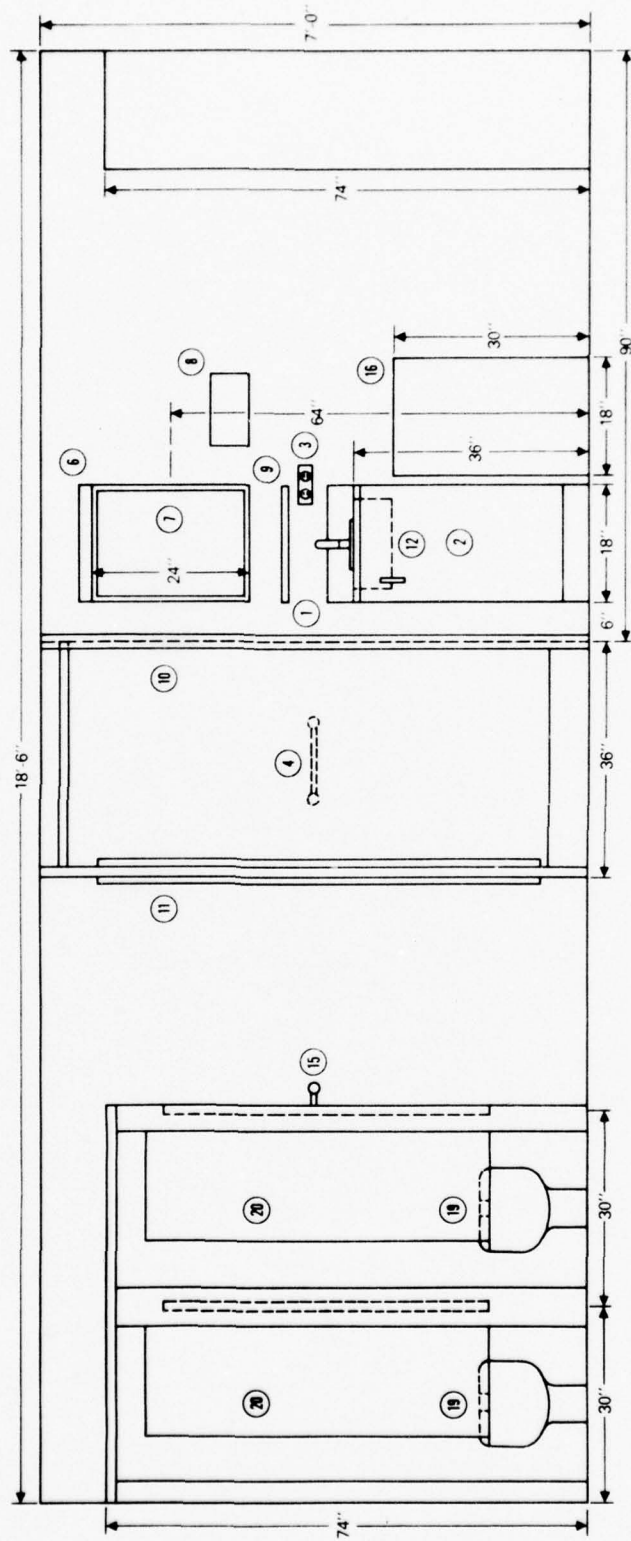


PLAN





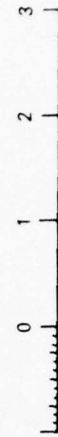
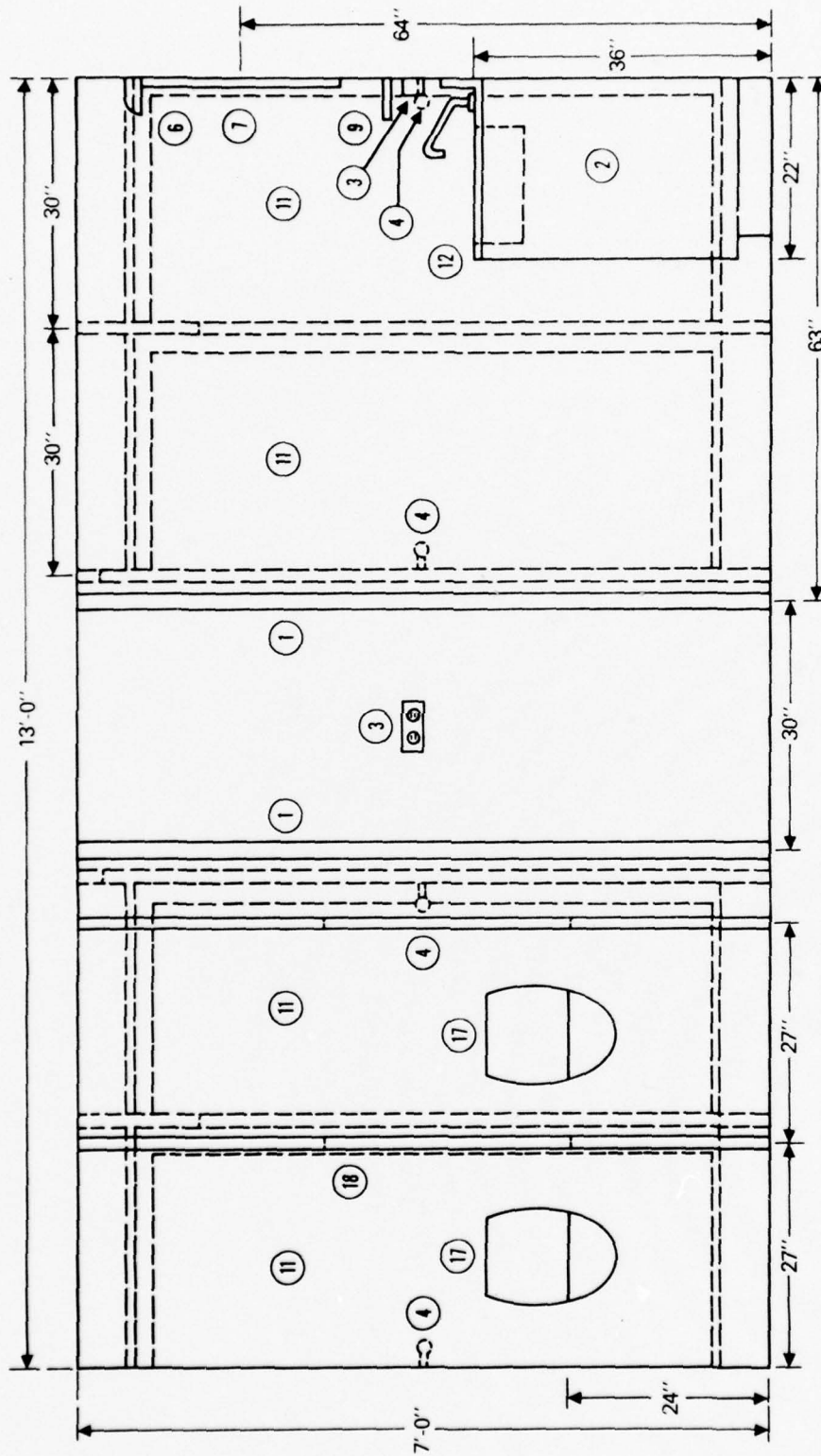
# WARD BATHROOM



## ELEVATION A-A

November 1976

# WARD BATHROOM



SCALE: 3/4" = 1'-0"

## ELEVATION B-B

This floor plan shows a kitchen layout with the following components and dimensions:

- Overall Dimensions:** 13'-0" wide by 9'-0" deep.
- Component 1:** A long rectangular unit at the bottom, 7'-0" wide and 74" high.
- Component 2:** A row of four tall cabinets, each 36" wide.
- Component 3:** Four small square units, each 9" wide, positioned between the tall cabinets and the island.
- Component 4:** A row of four tall cabinets, each 36" wide, located at the top right.
- Component 5:** A sink unit, 64" wide and 38" high, located at the top right.
- Component 6:** A long rectangular unit on the left, 13'-0" wide and 24" high.
- Component 7:** A large rectangular unit in the center, 13'-0" wide and 24" high.
- Component 8:** A small square unit, 6" wide, located at the bottom right corner.
- Component 9:** A long rectangular unit, 7'-0" wide, located at the bottom right.
- Component 10:** A small square unit, 6" wide, located at the bottom right corner.
- Component 11:** A small square unit, 6" wide, located at the bottom right corner.
- Component 12:** Four small square units, each 9" wide, positioned between the tall cabinets and the island.
- Component 13:** A small square unit, 6" wide, located at the bottom right corner.

SCALE: 3/4" = 1'-0"

**ELEVATION C-C**

SECTION 3

DESIGN CRITERIA  
FOR  
MEDICAL DEPARTMENT OFFICES

November 1976

## DESIGN CRITERIA FOR MEDICAL DEPARTMENT OFFICES

### Purpose

These design criteria are intended by the Bureau of Medicine and Surgery to assist the Naval Sea Systems Command in designing and building shipboard Medical Department Offices which will most efficiently and economically accomplish their purpose. They embody an arrangement of modern types of equipment. At the same time, they require a minimum of space. It is expected that they will provide a rational basis for the usual structural and arrangement drawings. There is no intention to abridge good design and shipbuilding practice.

Adherence to the arrangement shown is highly important. Dimensions shown (except for the overall dimensions) are intended to be typical and are not meant to be restrictive with respect to the suppliers of the equipment. Minor adjustments may be necessary to accommodate the equipment provided. Overall dimensions show the minimum acceptable usable area.

The equipment and service connections shown are confined to the major fixed and portable items necessary to accomplish the medical mission of the offices. There is no intent to include the nonmedical equipment routinely provided in such spaces, e.g., ventilation ducts, space lighting, etc., which must not infringe on the working area.

### Specific Criteria

1. The intent is to provide offices that are suited to the administrative needs of the Medical Departments of two sizes of ships. Increased efficiency is expected to result from the concentration of the medical administrative functions in one office. At the same time economy of space is achieved. The size of the office is dictated primarily by the total number of accommodations. The use of separate medical offices and consultation rooms is contemplated in the design.



The offices are designed for the performance of three functions, which are,

- a. Stowage and handling of medical records
- b. Medical Department administration
- c. Property and accounting functions for the department

Two designs have been developed, namely,

- a. Medical Department Office
- b. Medical Department Office (Limited)

The first is intended for large ships, and the second for ships having from 500 to 800 total accommodations. The elements of the Medical Department Office appear below in some detail; the same considerations apply to the Medical Department Office (Limited) but are not listed in detail.

2. The medical records are to be stowed in 5-drawer file cabinets. Assuming that a maximum of 6000 health records are to be maintained and filed, 14 cabinets are provided, on the following basis.

Effective filing length per drawer = 24"

Number of drawers =  $14 \times 5 = 70$  total

Total filing length =  $70 \times 24" = 1680"$

Assume 6000 health records -  $\frac{1680"}{6000} = 0.28"$  per record

Of the 14 cabinets, 12 are to be 15", and two are to be 18". The latter size is chosen to permit filing of x-ray prints.

Dental records are not included, as it is expected that they will be kept in the Dental Administrative Office.

3. The drawers of the filing cabinets are to be fitted with locking devices in order to protect the health records.

4. In order to expedite the issuing of health records for patients with advance appointments, an open-top box is provided near one door. Records may be extracted from the files in advance and placed in this box for quick pickup by the patients. A slot, or opening, through the bulkhead above this box is provided, so that records may be returned through the slot into the box when the office is closed.

5. To facilitate the handling of 5" x 8" stock cards, a counter is provided for the stowage of visible index file cabinets. The assigned location permits easy access to these files.
6. Dutch doors with drop shelves are provided in order to discourage unnecessary entry into the office, while still permitting the easy passage of records and other papers to and from the office.
7. The typewriter desks are to be suitable for electric typewriters. While these desks are shown with left-hand pedestals, they are normally available with right-hand pedestals also. The desired configuration should be specified when the furniture is ordered. Likewise, the flat top desk is available to either hand.
8. Cabinets and other furniture are to be made of steel, excepting trim, which may be made of an acceptable, fire-retardant substance.
9. All drawers are to be equipped with easily operated latches to prevent opening as a result of ship motion, and shelves are to be provided with lips or other means to prevent articles from sliding off because of ship's motion.
10. Mobile furniture is to have retractable casters or other means to prevent movement as a result of ship motion.
11. The provisions of the Air Conditioning, Ventilation, and Heating Design Criteria Manual for Surface Ships of the United States Navy, 1 July 1969, N.S. 0938-018-0010, are applicable.
12. The height of the overhead shall be at least seven feet.
13. Lighting and shock resistance are to conform to the applicable requirements of the General Specifications for Ships of the United States Navy.

### Drawing Notes

1. The numbers in circles (③) identify pieces of equipment; the letters in squares (A) identify services which are required, approximately in the locations shown. The exact locations will be in accordance with the recommendations of the equipment suppliers.
2. Details such as wiring, tubing, and piping have been omitted in the interest of simplicity.
3. Inches may be converted to metric equivalents by the use of the following table.

INCH-MILLIMETRE EQUIVALENTS

in	0	1	2	3	4	5	6	7	8	9
	mm									
0		25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2362.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6
100	2540.0	...	...	...	...	...	...	...	...	...

Note: Values in this table are based upon the relation 1 in. = 25.4 mm.

By manipulating the decimal point, any decimal value or multiple of an inch be converted to its equivalent in millimetres, centimetres, or metres.

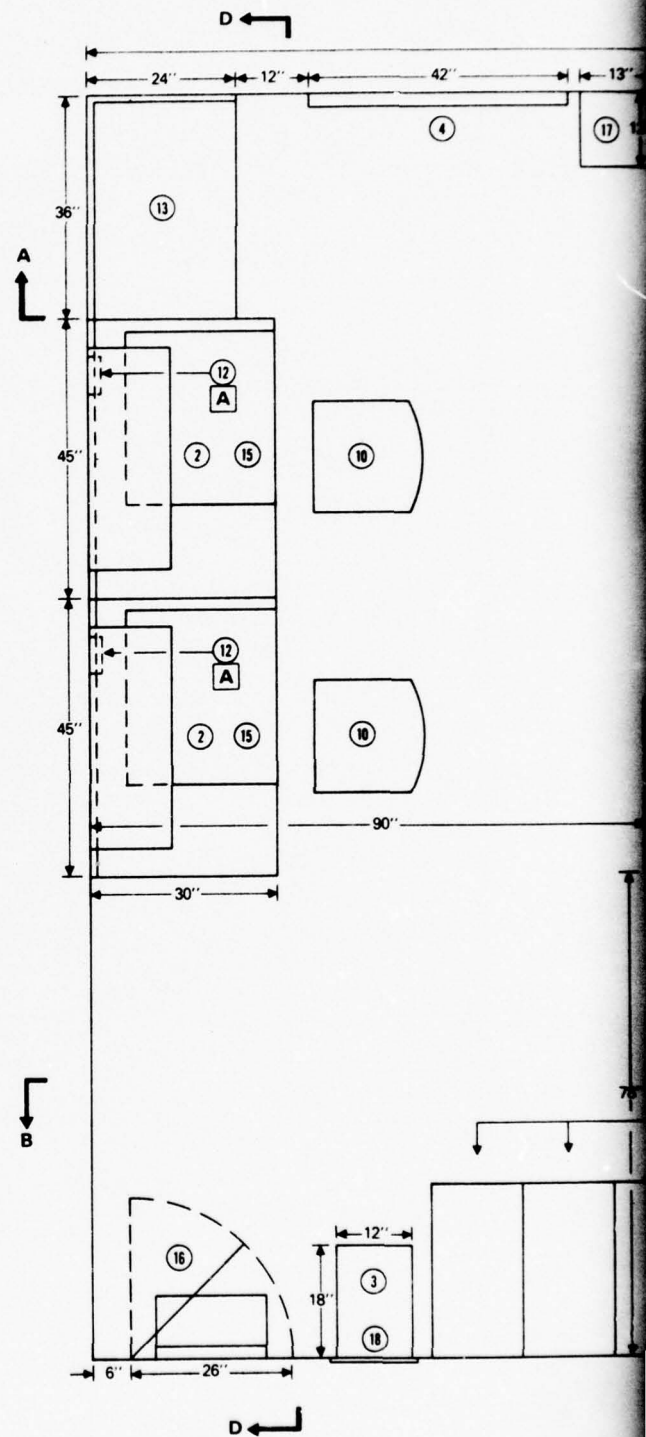
**MEDICAL DEPARTMENT OFFICE  
MAJOR EQUIPMENT AND SERVICES**

ITEM NO.	QTY	EQUIPMENT	SPECIFICATION	SERVICE REQUIRED A
1	1	BOOKCASE, 3 SECTION	NAVSEA	
2	7	BOOKRACK	NAVSEA	
3	1	BOX, MEDICAL RECORD, FOR APPOINTMENTS	NAVSEA	
4	1	BULLETIN BOARD	NAVSEA	
5	14	CABINET, FILING, 15", 5 DRAWER	NAVSEA	
6	2	CABINET, FILING, 18", 5 DRAWER	NAVSEA	
7	1	CABINET, FORM	NAVSEA	
8	1	CABINET, KEY	NAVSEA	
9	1	CHAIR, SWIVEL	NAVSEA	
10	6	CHAIR, TYPIST	NAVSEA	
11	1	CLOCK, 6"	NAVSEA	
12	7	CONVENIENCE ELECTRICAL OUTLET (DOUBLE)	NAVSEA	X
13	1	COUNTER, FOR VISIBLE INDEX FILING CABINETS	BUMED	
14	1	DESK, FLAT TOP, SINGLE PEDESTAL	NAVSEA	
15	6	DESK, TYPEWRITER, SINGLE PEDESTAL	NAVSEA	
16	2	DUTCH DOOR, WITH DROP SHELF	NAVSEA	
17	1	SAFE LOCKER	NAVSEA	
18	1	SLOT, FOR RECORD RETURN	NAVSEA	

SERVICE

A 110V 60 Hz ELECTRICITY

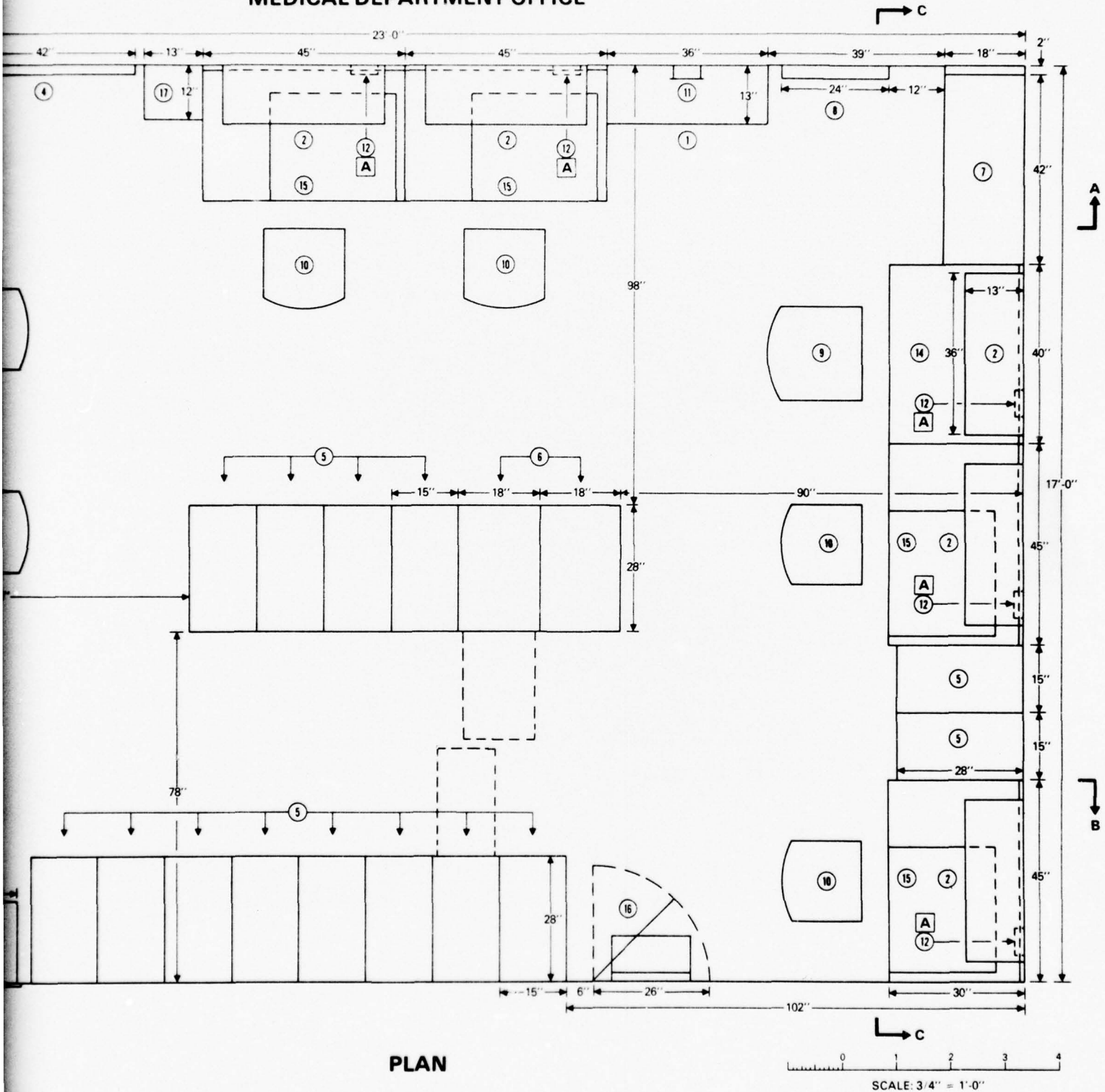




November 1976



# MEDICAL DEPARTMENT OFFICE

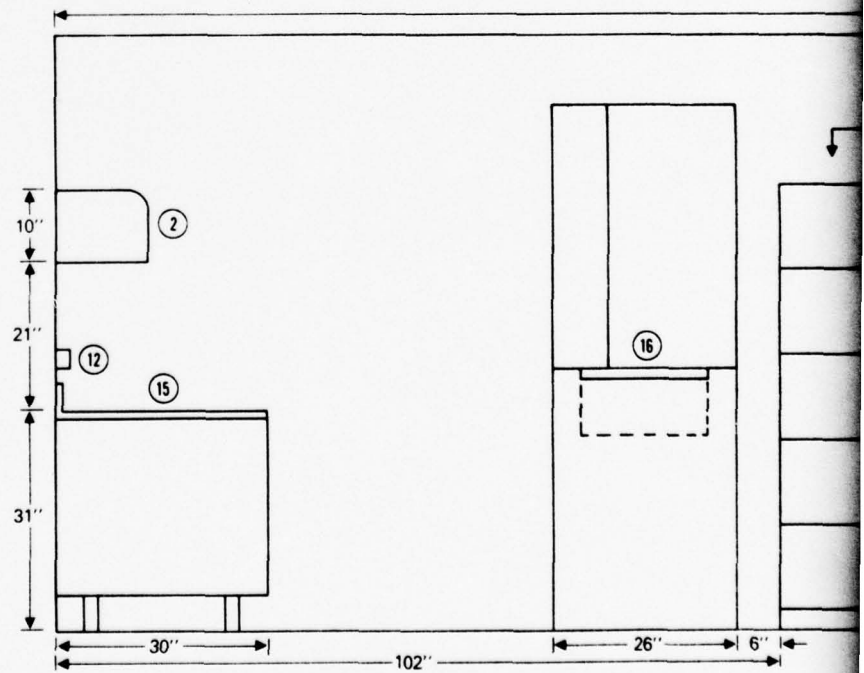
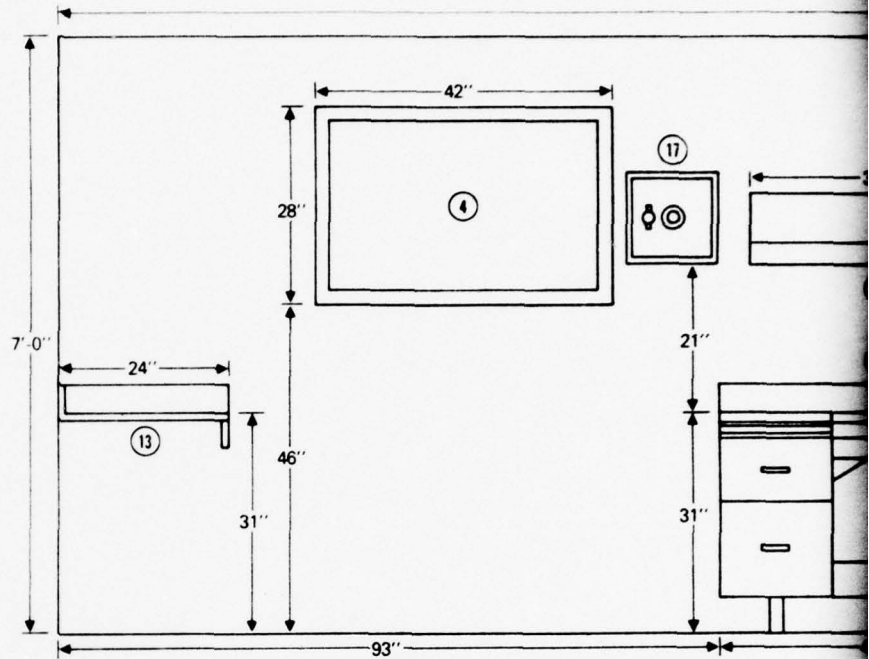


PLAN

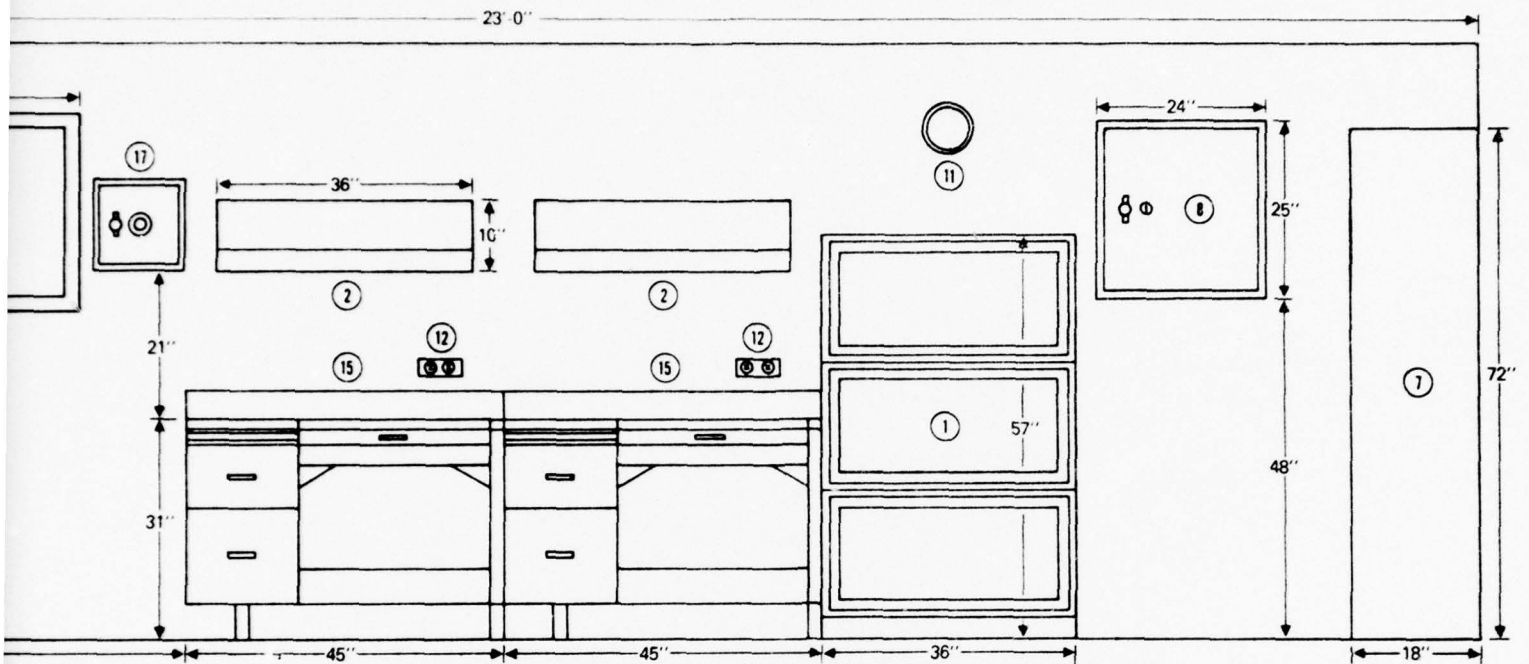
SCALE: 3/4" = 1'-0"

2

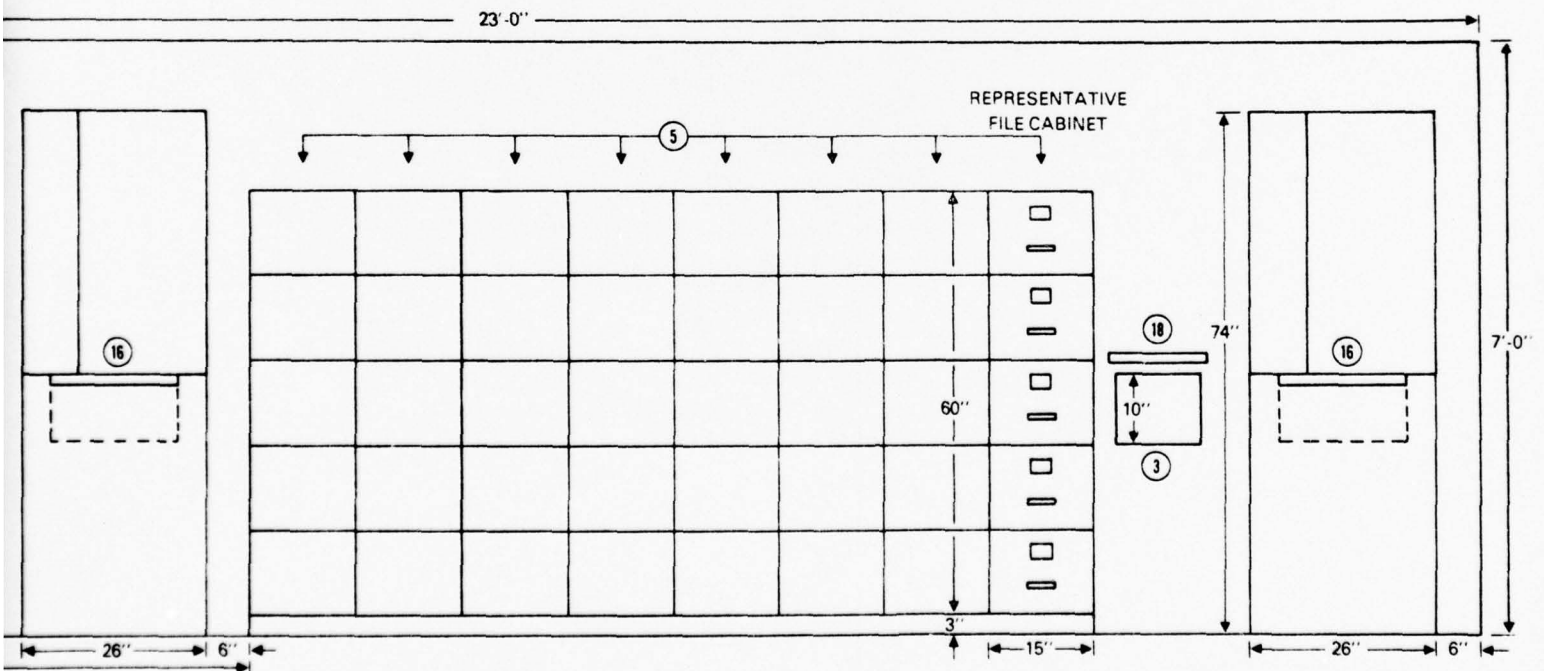
MEDIC



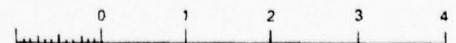
# MEDICAL DEPARTMENT OFFICE



ELEVATION A - A

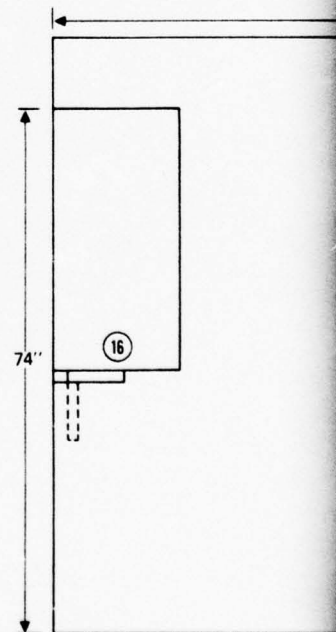
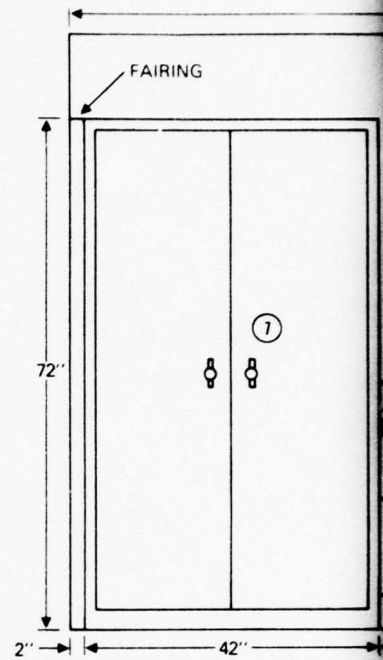


ELEVATION B - B

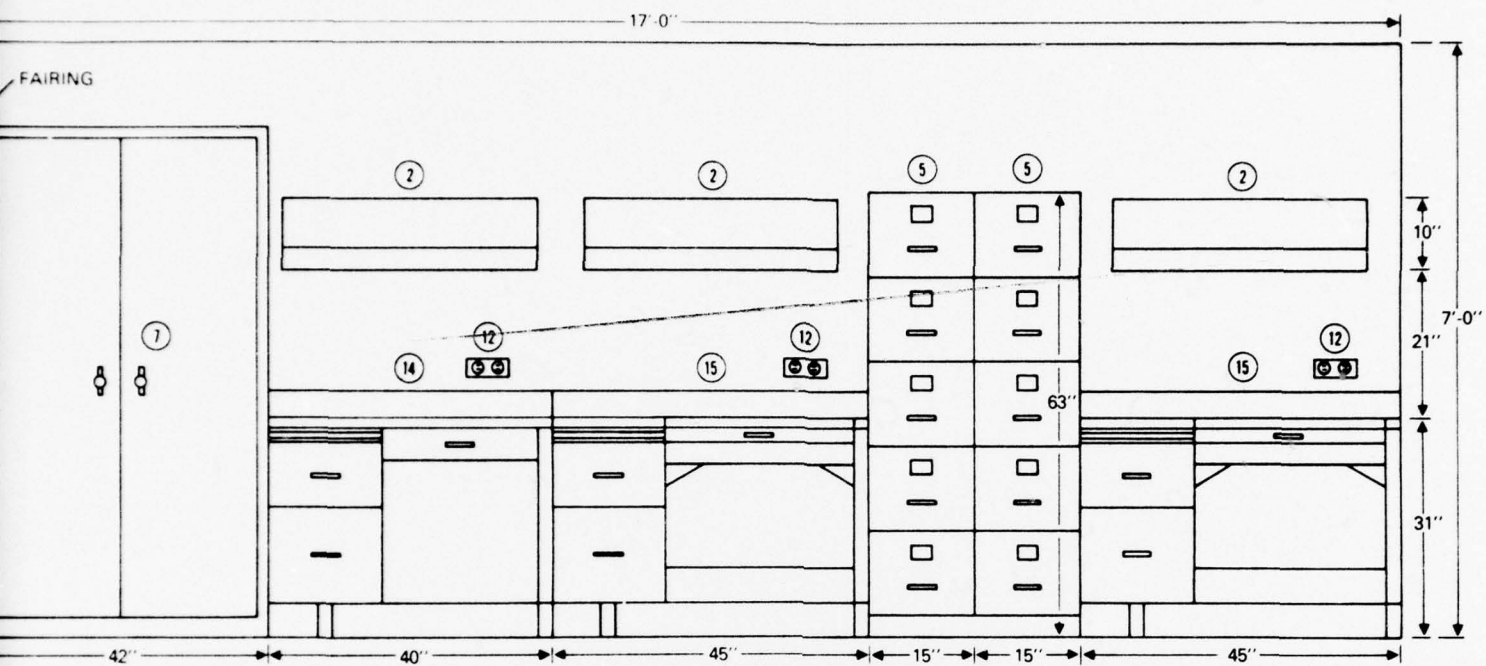


SCALE: 3/4" = 1'-0"

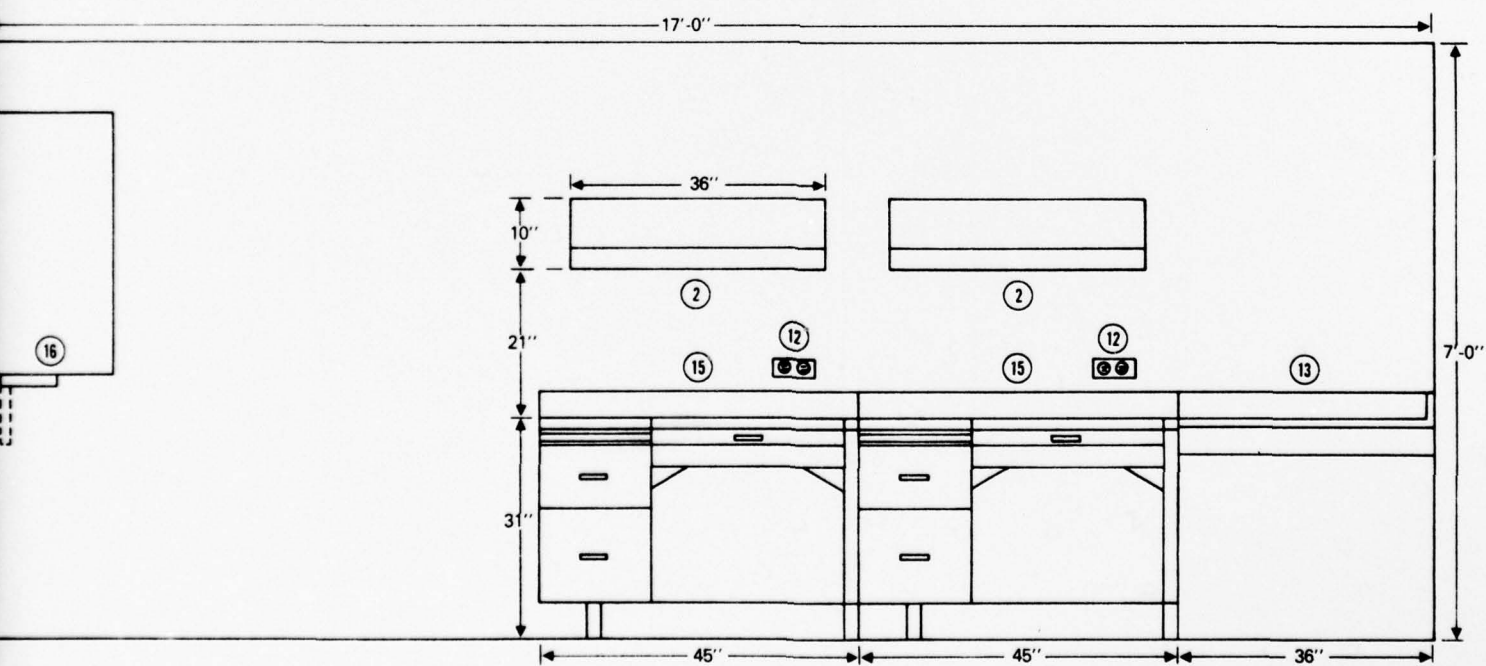
2



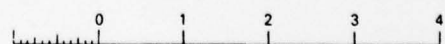
# MEDICAL DEPARTMENT OFFICE



ELEVATION C - C



ELEVATION D - D



SCALE: 3/4" = 1'-0"

2



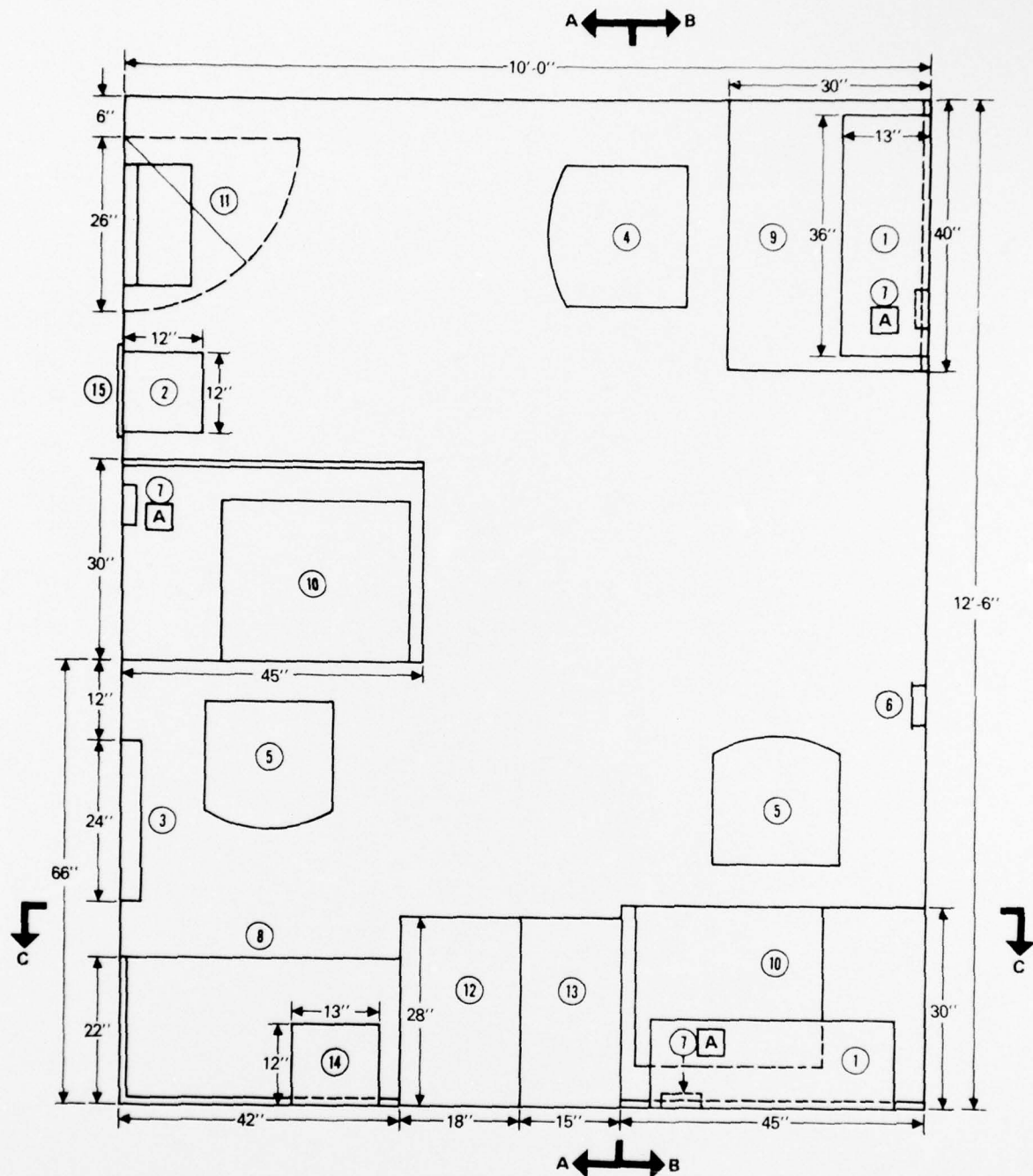
**MEDICAL DEPARTMENT OFFICE(LIMITED)  
MAJOR EQUIPMENT AND SERVICES**

ITEM NO.	QTY	EQUIPMENT	SPECIFICATION	SERVICE REQUIRED
				A
1	2	BOOKRACK	NAVSEA	
2	1	BOX, MEDICAL RECORD, FOR APPOINTMENTS	NAVSEA	
3	1	CABINET, KEY	NAVSEA	
4	1	CHAIR, SWIVEL	NAVSEA	
5	2	CHAIR, TYPIST	NAVSEA	
6	1	CLOCK, 6"	NAVSEA	
7	3	CONVENIENCE ELECTRICAL OUTLET (DOUBLE)	NAVSEA	X
8	1	COUNTER, FOR VISIBLE INDEX FILING CABINETS	BUMED	
9	1	DESK, FLAT TOP, SINGLE PEDESTAL	NAVSEA	
10	2	DESK, TYPEWRITER, SINGLE PEDESTAL	NAVSEA	
11	1	DUTCH DOOR, WITH DROP SHELF	NAVSEA	
12	1	FILING CABINET, 18", 5 DRAWER	NAVSEA	
13	1	FILING CABINET, 15", 5 DRAWER	NAVSEA	
14	1	SAFE LOCKER	NAVSEA	
15	1	SLOT, FOR RECORD RETURN	NAVSEA	

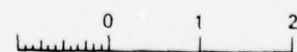
SERVICE

A 110 V 60 H<sub>z</sub> ELECTRICITY

# MEDICAL DEPARTMENT OFFICE (LIMITED)



PLAN

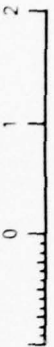
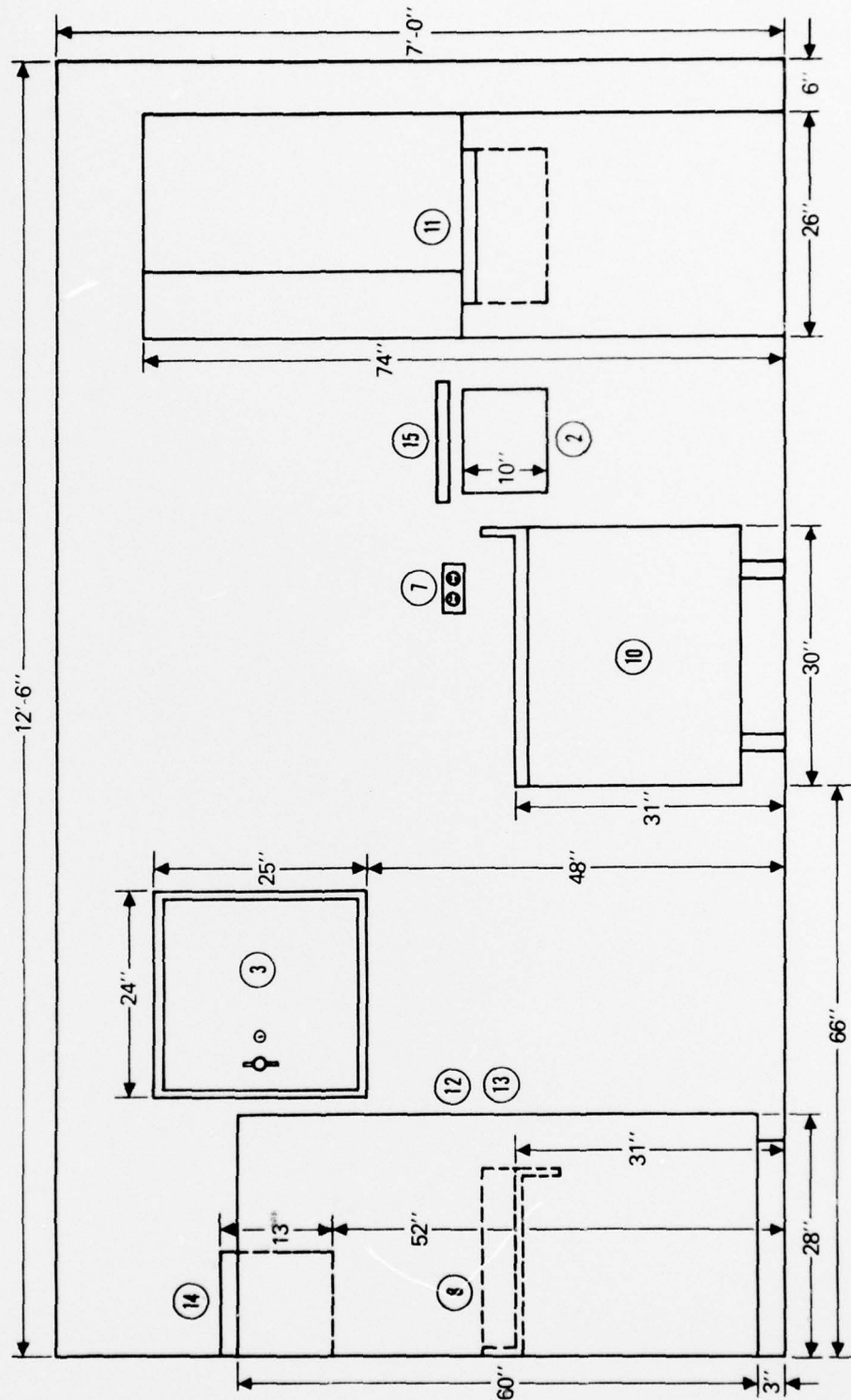


SCALE: 3/4" = 1'-0"

November 1976

3.10

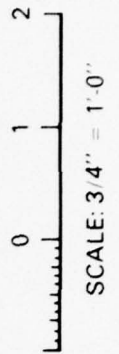
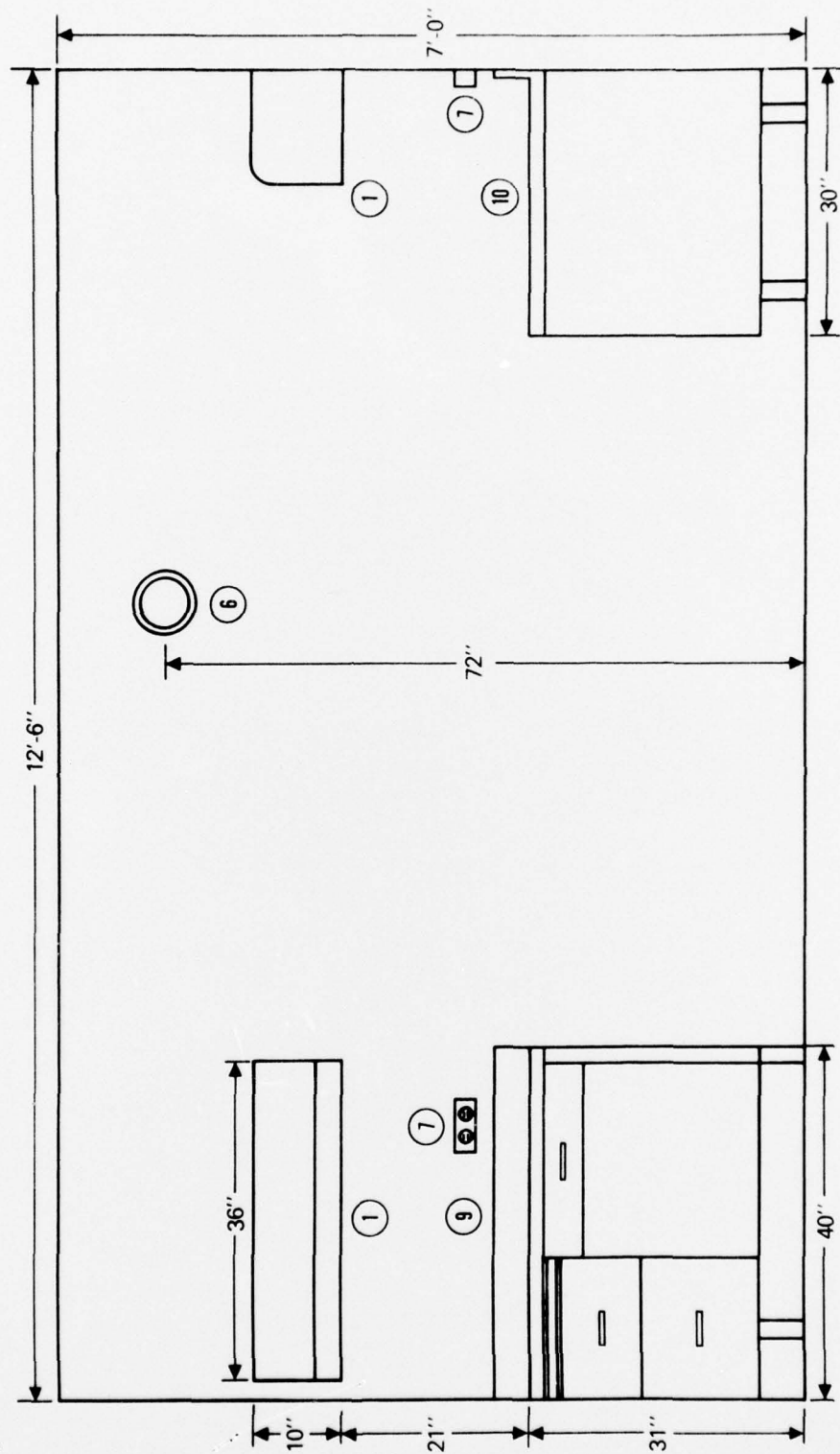
MEDICAL DEPARTMENT OFFICE (LIMITED)



SCALE: 3/4" = 1'-0"

ELEVATION A-A

MEDICAL DEPARTMENT OFFICE (LIMITED)

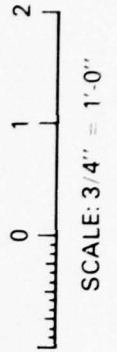
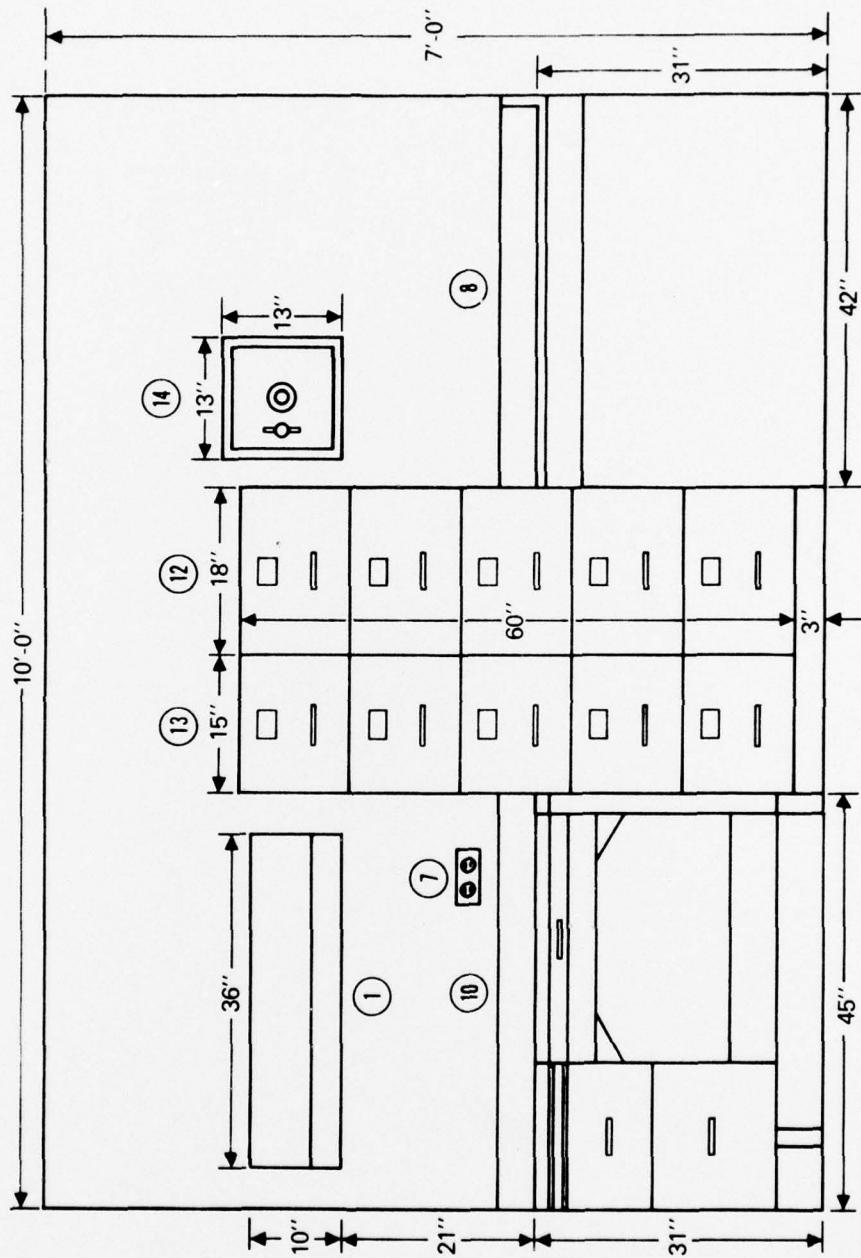


ELEVATION B-B

November 1976

3.12

MEDICAL DEPARTMENT OFFICE (LIMITED)



ELEVATION C-C



SECTION 4

DESIGN CRITERIA  
FOR  
SPECIMEN COLLECTION AREAS

November 1976

## DESIGN CRITERIA FOR SPECIMEN COLLECTION AREAS

### Purpose

These design criteria are intended by the Bureau of Medicine and Surgery to assist the Naval Sea Systems Command in designing and building shipboard specimen collection areas which will most efficiently and economically accomplish their purpose. They embody an arrangement of modern types of equipment. At the same time, they require a minimum of space. It is expected that they will provide a rational basis for the usual structural and arrangement drawings. There is no intention to abridge good design and shipbuilding practice.

Adherence to the arrangement shown is highly important. Dimensions shown (except for the overall dimensions) are intended to be typical and are not meant to be restrictive with respect to the suppliers of the equipment. Minor adjustments may be necessary to accommodate the equipment provided. Overall dimensions show the minimum acceptable usable area.

The equipment and service connections shown are confined to the major fixed and portable items necessary to accomplish the medical mission of the areas. There is no intent to include the nonmedical equipment routinely provided in such spaces, e.g., ventilation ducts, space lighting, etc., which must not infringe on the working area.

### Specific Criteria

1. The intent is to provide a suitable area in which patients may collect laboratory specimens as required. In the interest of privacy, such a space should be separate and enclosed; in the interest of efficiency, it should be near the laboratory area. Adequate CRES shelving should be installed

to permit the storage of a supply of sterile bottles in a readily accessible location.

2. The design is such that the specimen collection area may be in a stall in a row of water closet stalls, if such an arrangement is desired. However, it can equally well be in a small separate compartment. Plans for both arrangements are shown, and each requires substantially an equal area. If the collection area is incorporated in a row of water closet stalls, the ventilation system of the compartment will serve the stall also. If the collection area is in a small, separate compartment, adequate ventilation must be provided.

3. In selecting the location for the collecting station, it should be borne in mind that female patients may require its use, either as crew members or as evacuees.

4. The CRES shelves should have lips to prevent articles from sliding off as a result of the ship's motion.

5. The provisions of the Air Conditioning, Ventilation, and Heating Design Criteria Manual for Surface Ships of the United States Navy, 1 July 1969, N.S. 0938-018-0010, are applicable.

6. The height of the overhead shall be at least seven feet.

7. Lighting and shock resistance are to conform to the applicable requirements of the General Specifications for Ships of the United States Navy.

#### Drawing Notes

1. The numbers in circles ( ③ ) identify pieces of equipment; the letters in squares ( [A] ) identify services which are required, approximately in the

locations shown. The exact locations will be in accordance with the recommendations of the equipment suppliers. Mobile equipment is shown in the stowed positions.

2. Details such as wiring, tubing, and piping have been omitted in the interest of simplicity.

3. Inches may be converted to metric equivalents by the use of the following table.

INCH-MILLIMETRE EQUIVALENTS

in.	0	1	2	3	4	5	6	7	8	9
	mm									
0		25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2362.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6
100	2540.0	...	...	...	...	...	...	...	...	...

Note: Values in this table are based upon the relation 1 in. = 25.4 mm. By manipulating the decimal point, any decimal value or multiple of an inch may be converted to its equivalent in millimetres, centimetres, or metres.



### SPECIMEN COLLECTION AREA MAJOR EQUIPMENT AND SERVICES

ITEM NO.	QTY	EQUIPMENT	SPECIFICATION	SERVICES REQUIRED					
				A	B	C	D	E	F
1	1	DETERGENT DISPENSER	BUMED						
2	1	PAPER TOWEL DISPENSER	COMMERCIAL						
3	2	SHELF (CRES) WITH LIP	NAVSEA						
4	1	SINK, LAVATORY, WITH CABINET UNDER	BUMED		X	X	X		
5	1	TRASH RECEPTACLE	NAVSEA						
6	1	WATER CLOSET	NAVSEA					X	X

#### SERVICES

- A 110V 60HZ ELECTRICITY
- B COLD FRESH WATER
- C HOT FRESH WATER
- D DRAINAGE
- E SALT WATER
- F SEWAGE DRAINAGE



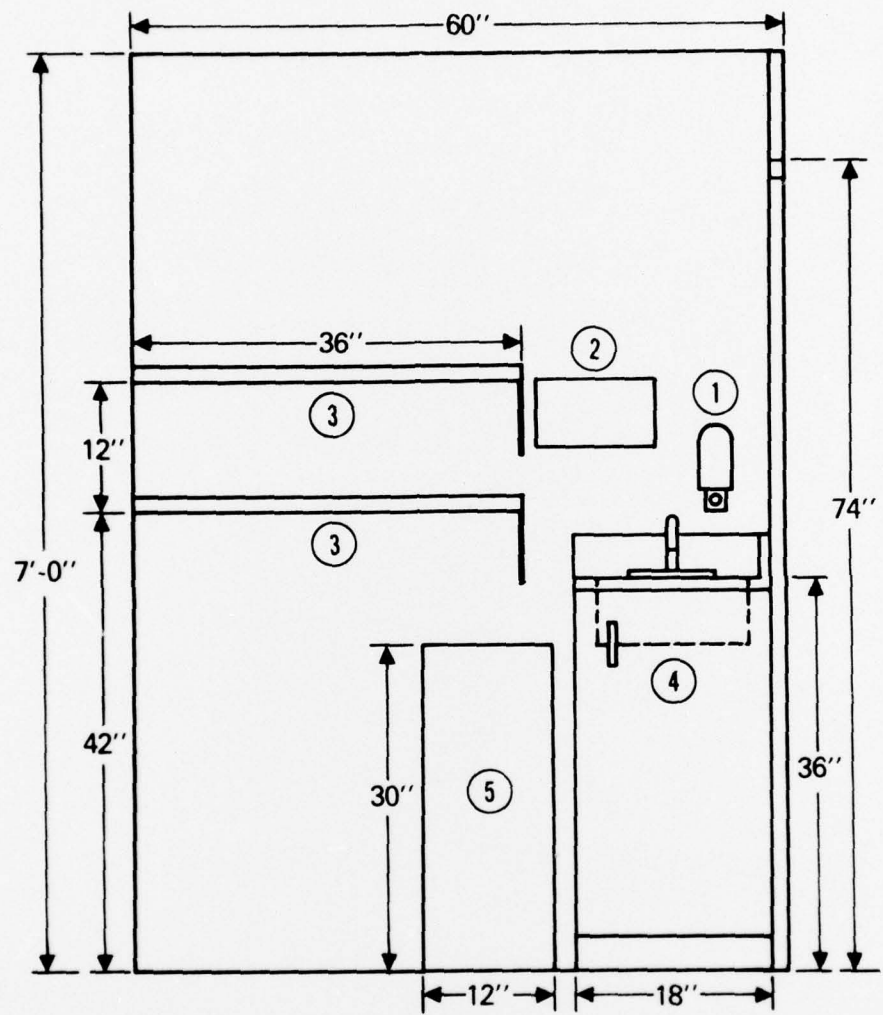
(AS A STALL)

Diagram illustrating the layout of a three-stall bathroom, showing dimensions and numbered callouts for components:

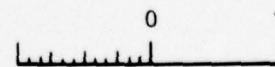
- Overall Dimensions:**
  - Width: 60"
  - Height: 54"
- Stall Dimensions and Components:**
  - Top Stall:**
    - Width: 36"
    - Height: 12"
    - Callouts: 1, 2, 3, 4, 5
  - Middle Stall:**
    - Width: 30" MIN.
    - Height: 15"
    - Callouts: 6, 7
  - Bottom Stall:**
    - Width: 18"
    - Height: 24"
    - Callouts: 8, 9
- Other Features:**
  - Two sinks are shown, one in the top stall and one in the bottom stall.
  - Two mirrors are shown, one above each sink.
  - Two doors are shown, one for the top stall and one for the bottom stall.
  - Two sets of lockers are shown, one in the top stall and one in the bottom stall.
  - Two sets of benches are shown, one in the top stall and one in the bottom stall.
  - Two sets of mirrors are shown, one above each sink.
  - Two sets of doors are shown, one for the top stall and one for the bottom stall.
  - Two sets of lockers are shown, one in the top stall and one in the bottom stall.
  - Two sets of benches are shown, one in the top stall and one in the bottom stall.

## 4.5

# **SPECIMEN COLLECTION AREA (AS A STALL)**

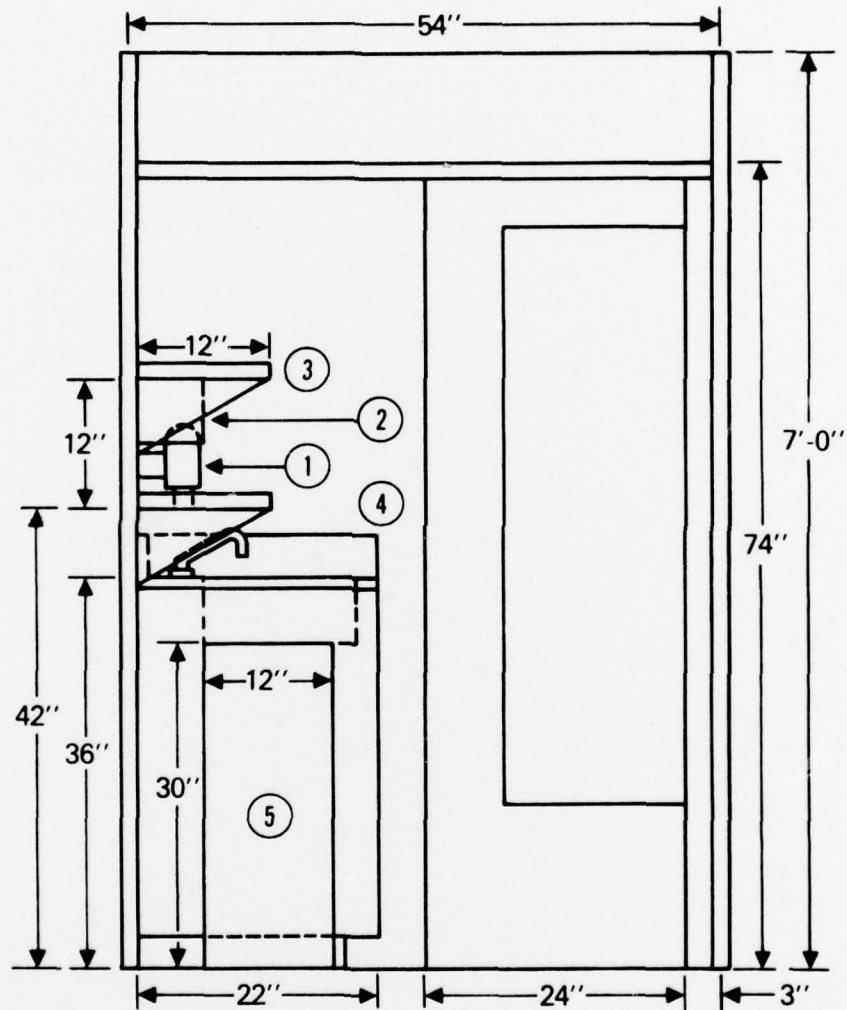


**ELEVATION A-A**

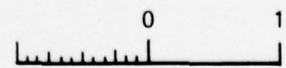


SCALE: 3/4" = 1'-0"

**SPECIMEN COLLECTION AREA  
(AS A STALL)**

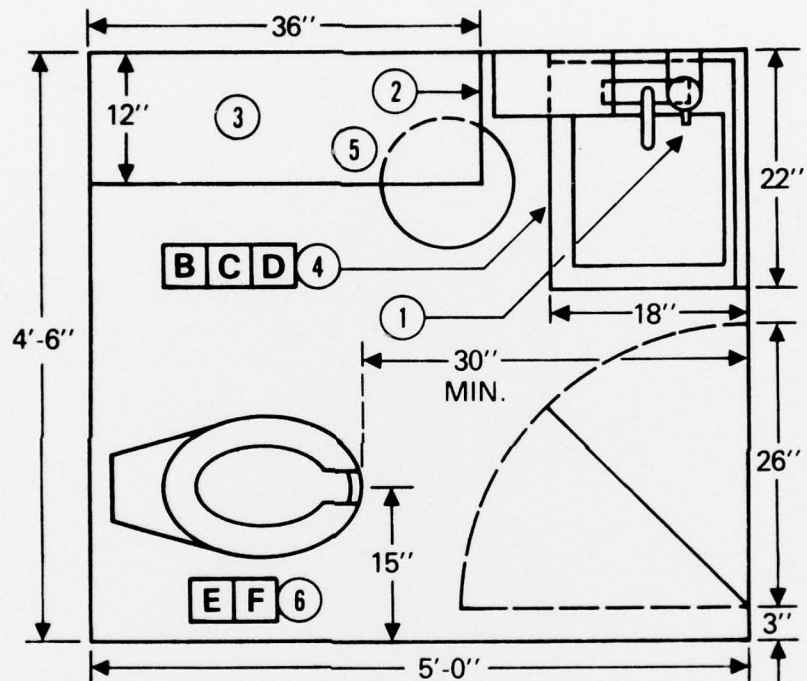


**ELEVATION B—B**

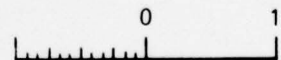


SCALE: 3/4" = 1'-0"

**SPECIMEN COLLECTION AREA  
(AS A COMPARTMENT)**



**PLAN**



SCALE: 3/4" = 1'-0"